

West Nile virus and other arboviral activity: Weekly Summary, Michigan 2012

December 31, 2012 (Final)

5,649

Mosquito pools tested for arbovirus infection in 2012.

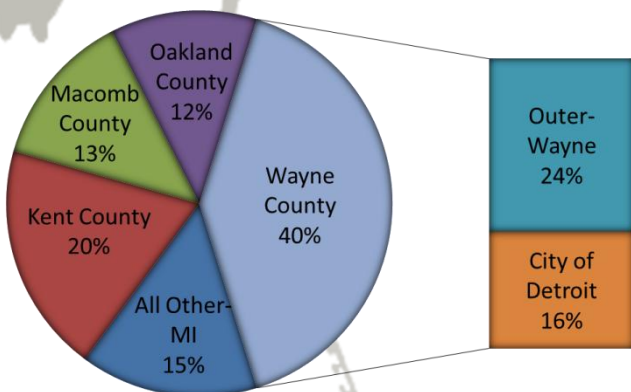
Twenty-four pools tested positive for WNV.

57

The median age among WNV cases is 57 years. The range is 2-91 years.

85%

of all 2012 human WNV activity including illness and viremic blood donors is from the Grand Rapids and Detroit Metro areas.



As of November 2, 2012, the Michigan Department of Community Health considers the arbovirus transmission season to be at an end. This will be the final weekly surveillance summary for the 2012 season. Further updates to case counts will be available at the Emerging Diseases website, www.michigan.gov/westnilevirus.

West Nile virus (WNV) activity in 2012

Reported WNV disease cases: As of November 2, 2012, there have been 201 **human cases of WNV disease** reported from 21 Michigan counties. Of these cases, 143 (71%) were classified as neuroinvasive disease (e.g., meningitis, encephalitis, acute flaccid paralysis) and 58 (29%) as non-neuroinvasive disease (Table 1). To date there have been **15 fatalities** among reported cases of WNV in Michigan. Dates of illness onset for disease range from July 6 – October 6.

Presumptive viremic blood donors: A total of **38 WNV presumptive viremic blood donors** have been reported in Michigan with donation dates between June 25 and October 16. Ten donors were from Kent County and eleven donors were from Wayne County including one resident from the City of Detroit. Other counties with positive donors include Ingham, Jackson, Livingston, Macomb, Mason, Oakland, Ottawa and Washtenaw. Most people who are infected with WNV do not develop an illness but virus might be temporarily present in their blood. These asymptomatic but infected people are detected through routine blood donor screening, which provides an important early warning of WNV activity in an area.

Comparison to 2011 data: Figure 1 displays the onset dates of human WNV cases in 2012 compared to 2011. The current 198 cases is the highest number of cases reported for this time of year since the 2002 West Nile virus outbreak.

Ecological Surveillance: WNV detection in wildlife and mosquitoes can give communities early warning of disease activity. Mosquito testing for WNV in the state has ended for the 2012 season, and will resume in June 2013. Human and ecologic surveillance results are shown in Figures 2 and 3.

For more information

www.michigan.gov/westnilevirus
Automated Hotline: 877-757-5717



Table 1. Human West Nile virus infections reported in Michigan, 2012, by county and reported clinical syndrome.

County	Neuroinvasive disease cases	Non-neuroinvasive disease cases	Total cases	Deaths	Presumptive viremic blood donors
Allegan	0	2	2	0	0
Barry	0	1	1	0	0
Clinton	2	0	2	0	0
Eaton	1	0	1	0	0
Gladwin	0	1	1	0	0
Ingham	4	2	6	0	2
Jackson	2	0	2	0	1
Kalamazoo	1	0	1	0	0
Kent	25	16	41	2	10
Lapeer	1	0	1	0	0
Lenawee	1	0	1	0	0
Livingston	0	0	0	0	2
Macomb	17	11	28	3	3
Mason	0	0	0	0	1
Muskegon	1	0	1	0	0
Oakland	18	5	23	0	5
Ogemaw	1	0	1	1	0
Ottawa	0	1	1	0	1
St. Clair	1	0	1	0	0
Washtenaw	2	2	4	1	2
Wayne	36	11	47	3	10
City of Detroit	31	5	36	5	1
Totals	144	57	201	15	38

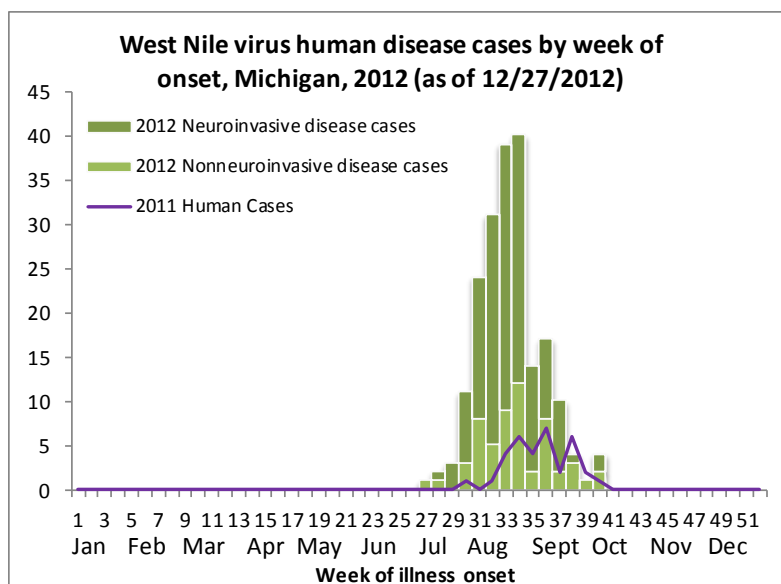


Figure 1 (left). Illness onset of WNV human cases in Michigan, 2012 (green bars), compared to 2011 (purple line). Reported human illness case onsets in 2012 began two-weeks earlier than in 2011 and have surpassed all previous years besides 2002.

Figure 2 (below left). Reported WNV human illnesses or presumptive viremic blood donors in Michigan, 2012, by county of residence.

Figure 3 (below right). Reported mosquito, domestic animal, and wildlife species testing positive for WNV in Michigan, 2012.

